



# **Final Scoping Report** for the **Proposed Lake Davis Pike Eradication Project**

*Prepared by:*



**California Department of Fish and Game**  
*and*  
**U.S. Forest Service**



**February 2006**

*FINAL*  
Scoping Report  
  
*for the*  
  
Proposed  
Lake Davis Pike Eradication Project  
Environmental Impact Report/  
Environmental Impact Statement

This report available online at: <http://www.dfg.ca.gov/northernpike>

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# INTRODUCTION

This report summarizes the comments received by the California Department of Fish and Game (DFG) and the U.S. Forest Service (USFS) during the public scoping period for the Environmental Impact Report/Environmental Impact Statement (EIR/EIS) that the DFG and USFS are jointly preparing for the proposed Lake Davis Pike Eradication Project. The EIR/EIS is being prepared in accordance with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). As the project proponent, DFG is the lead agency under CEQA. Because the proposed project would require a special use permit and potentially two forest closures, the USFS is participating as the NEPA lead agency.

*Scoping* is the process of early consultation with the affected public and agencies prior to completing a draft EIR/EIS. The State of California's CEQA Guidelines and the Federal Council on Environmental Quality's NEPA regulations provide specific guidance for scoping, which has the following general purposes:

- To identify the following to be analyzed in depth in the EIR/EIS:
  - Range of actions
  - Alternatives
  - Mitigation measures
  - Significant effects
- To bring together and consider the concerns of affected Federal, State, and local agencies, the project proponent, and other interested persons, including Native Americans.

DFG and USFS are committed to strong local involvement. Accordingly, four public scoping meetings were held for the general public and cooperating agencies to provide input on the proposed project, and articulate issues and concerns that should be addressed in the EIR/EIS. This report is intended for use by the public to have access to and understand the comments received during the scoping period. It includes verbal and written public comments received during the scoping period (September 14, 2005 to October 31, 2005). DFG and USFS will use this report to help identify and refine the range of actions, alternatives, environmental effects, and mitigation measures to be analyzed in depth in the EIR/EIS. As required by CEQA and NEPA, all public comments will be considered in the process. However, no perspectives will be deemed more or less important based on the total number of similar comments received.

# BACKGROUND

## Lake Davis

Lake Davis is located in Plumas County, California, in the upper reaches of the Middle Fork Feather River watershed in the Sierra Nevada Mountains, at an elevation of 5,775 feet above sea level (Figure 1, page 5). A State Water Project reservoir, Lake Davis is operated by the California Department of Water Resources (DWR) and lies within the USFS Plumas National Forest. Lake Davis was impounded in 1966-68 by the construction of Grizzly Valley Dam on Big Grizzly Creek and is the product of inflow from Big Grizzly Creek, the largest tributary, and other lesser tributaries including Freeman and Cow creeks. When full, it has a surface area of 4,025 acres at a capacity of 84,371 acre-feet, a shoreline of over 32 linear miles, and an average depth of 21 feet. The deepest point of the lake is 108 feet, just upstream of the dam.

Lake Davis is an important recreational venue supporting a popular trout fishery managed by DFG, boating, shoreline-based camping, hiking, wildlife viewing, and associated day-uses. The recreational role of the lake is an important factor in the local economy of the City of Portola and Plumas County.

Lake Davis water is also used for irrigation and has been developed as a source of domestic water for the City of Portola and the Grizzly Lake Resort Improvement District (GLRID). Lake Davis was taken offline as a source of domestic water prior to the October 1997 chemical treatment (described below), and continues to be offline pending improvements to the water treatment plant. Currently, neither the City of Portola nor the GLRID use Lake Davis as a water supply. Nearby residences depend on groundwater from private wells.

## The Threat of Pike Invasion

Northern pike (*Esox lucius*) is a non-native predatory fish species illegally introduced to California. Pike introductions in other regions have demonstrated that pike have the potential to become the dominant fish species, preying upon and out-competing desirable sport and commercial fishes, as well as endemic aquatic species. Through the Feather River, Lake Davis is connected to the Sacramento-San Joaquin Rivers Delta, which is home to many economically important fisheries as well as many state and federally-listed species (Figure 2, page 6). Should the pike escape or be moved from the reservoir, they would likely do irreversible damage to the aquatic ecosystem and fisheries in the Bay-Delta estuary and its watershed, as well as potentially harm other areas of California and the western United States. Eliminating this threat is a high priority for the CALFED Bay-Delta Program Ecosystem Restoration Program. In its Strategic Plan for Ecosystem Restoration, it states that “Northern pike are noted predators and could, if allowed to establish themselves, pose a significant threat to native fishes, such as Chinook salmon, steelhead, and delta smelt” (1999, pg. 464).

Since the known extent of northern pike in California is limited to Lake Davis and its tributary streams, a temporary window of opportunity exists to eliminate the species from the state. The wider the distribution becomes, the less likely an effective eradication program can be

successfully undertaken. Similarly, a wider geographical distribution of pike in California may also provide more opportunities to intentionally or unintentionally distribute this non-native predator throughout the western United States.

## History of Pike Introduction and Eradication Efforts

Northern pike were illegally introduced into Plumas County on at least two occasions. They were successfully eradicated from Frenchman Reservoir and Sierra Valley in 1991 and 1992. Pike were discovered in Lake Davis in 1994. A Final EIR was prepared and filed in January of 1997 for a project to eliminate pike from Lake Davis and its tributary streams. The reservoir was chemically treated to eradicate the pike in October 1997. However, pike were rediscovered in the lake eighteen months later, in May, 1999. The DFG Director at the time, Robert Hight, visited Portola to discuss the issue with community leaders. At the request of Director Hight, the Lake Davis Steering Committee (Steering Committee) was formed in 1999 to address the pike invasion issue and subsequent eradication efforts. DFG also opened an office in Portola to support coordination of Lake Davis efforts and to increase staff availability to local and regional citizens.

The Steering Committee is composed of private citizens, and city and county elected officials. State and Federal agencies also participate in the Committee. Appendix A presents the current list of Steering Committee members. In February 2000, DFG and the Steering Committee developed a management plan, “*Managing Northern Pike at Lake Davis, a Plan for Y2000*” (Y2K Plan). This document is available online at <http://www.dfg.ca.gov/northernpike/mgpike.htm>. The Y2K Plan recommended strategies to control the pike population, contain the pike within Lake Davis, and remove as many pike as possible from the reservoir without the use of rotenone. Recommendations included increased public education, law enforcement, electro fishing and trapping, as well as an experimental method of eradication using underwater detonation cord.

Since February 2000, DFG, in cooperation with the Steering Committee, has been implementing a “control and containment” strategy as recommended in the Y2K Plan. Efforts to date have resulted in about 55,000 pike being removed from the lake. However, data indicate that pike numbers continue to increase despite the control measures. Recognizing that the threat of pike to the Lake Davis trout fishery was not diminishing, DFG and the Steering Committee prepared a preliminary outline of potential eradication methods in May, 2004. The document, titled “Lake Davis Northern Pike Eradication Options,” is available online at <http://www.dfg.ca.gov/northernpike/options.pdf>.

In December 2003, the Steering Committee sent a letter to the California Secretary of Resources, Mr. Mike Chrisman, requesting DFG investigate methods to rid the lake of pike (Appendix B). The committee requested that any project be done in cooperation with local, State, and Federal agencies, as well as the local community. Secretary Chrisman directed DFG staff to investigate an eradication project that addressed the protection of public and environmental health while considering economic concerns (Appendix C).

## **Proposed Pike Eradication**

DFG proposes to eradicate northern pike from Lake Davis and its tributaries, thus preventing their downstream spread and reducing the chances of pike being relocated to Californian and other western region waters. A Project Description and Initial Study were developed (Appendix D) that included a proposed project and several potential alternatives. The proposed project was determined to potentially have a significant effect on the environment, thereby requiring an EIR/EIS.

## **Notice of Preparation and Notice of Intent**

CEQA and NEPA require formal public announcement of the intent to prepare an EIR/EIS for a proposed project. In compliance with CEQA, the DFG issued a Notice of Preparation (NOP) on September 14, 2005. In compliance with NEPA, the USFS published a Notice of Intent (NOI) in the Federal Register (Volume 68, Number 217) on September 14, 2005. Both the NOP and NOI invited the public to offer comments during the scoping period, which began September 14, 2005 and closed October 31, 2005. Copies of the NOP and NOI are provided in Appendix E.

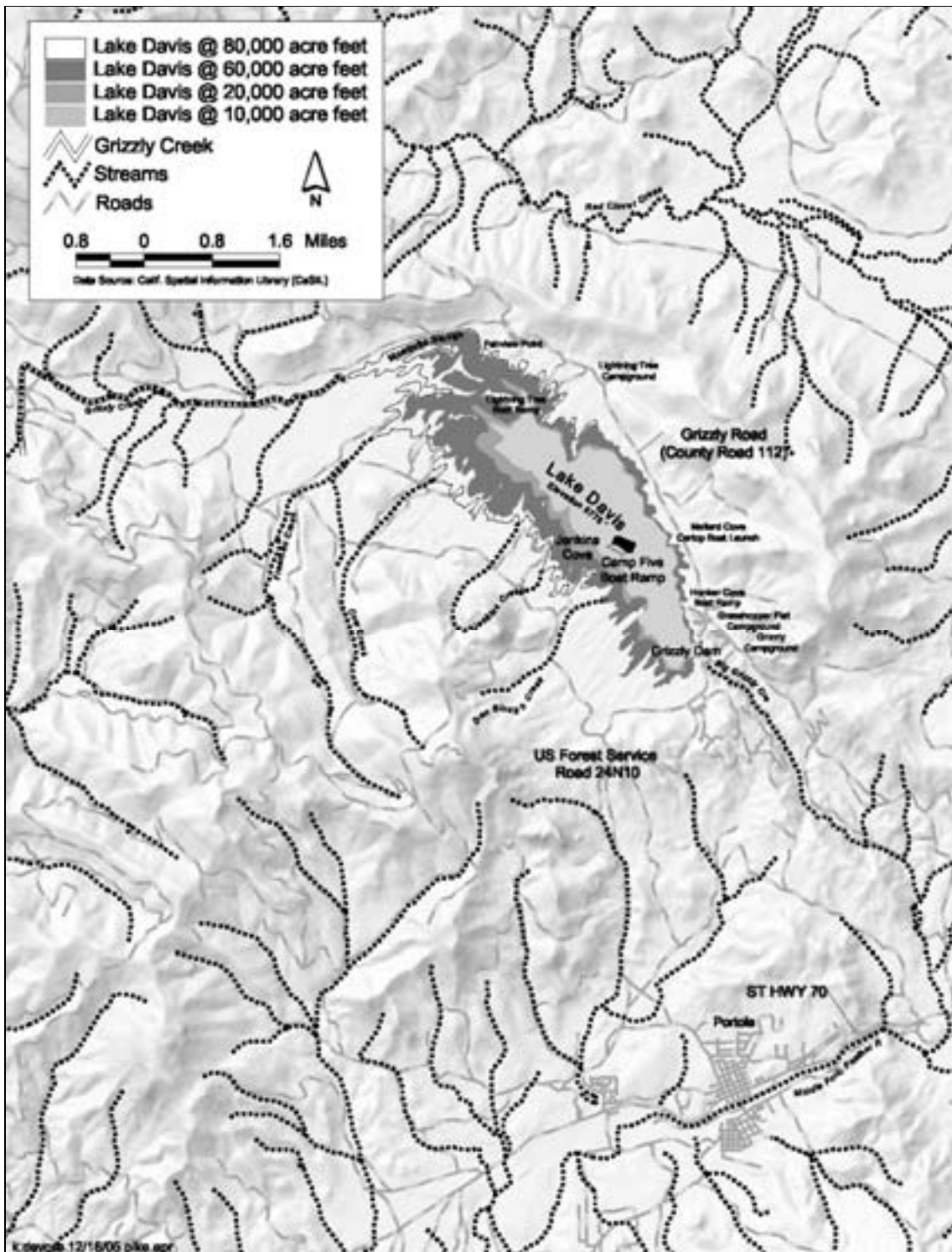
## **Stakeholder Coordination**


DFG and USFS are committed to an inclusive, open, and transparent process to evaluate the proposed project, as well as alternative approaches, to eradicate pike from Lake Davis. They are actively engaging the local community (including the Steering Committee), and are also coordinating with Federal, State, and local agencies, and tribes that have an interest in the proposed project and/or could have a role in reviewing and/or providing permits or other approvals for various aspects of the proposed project.

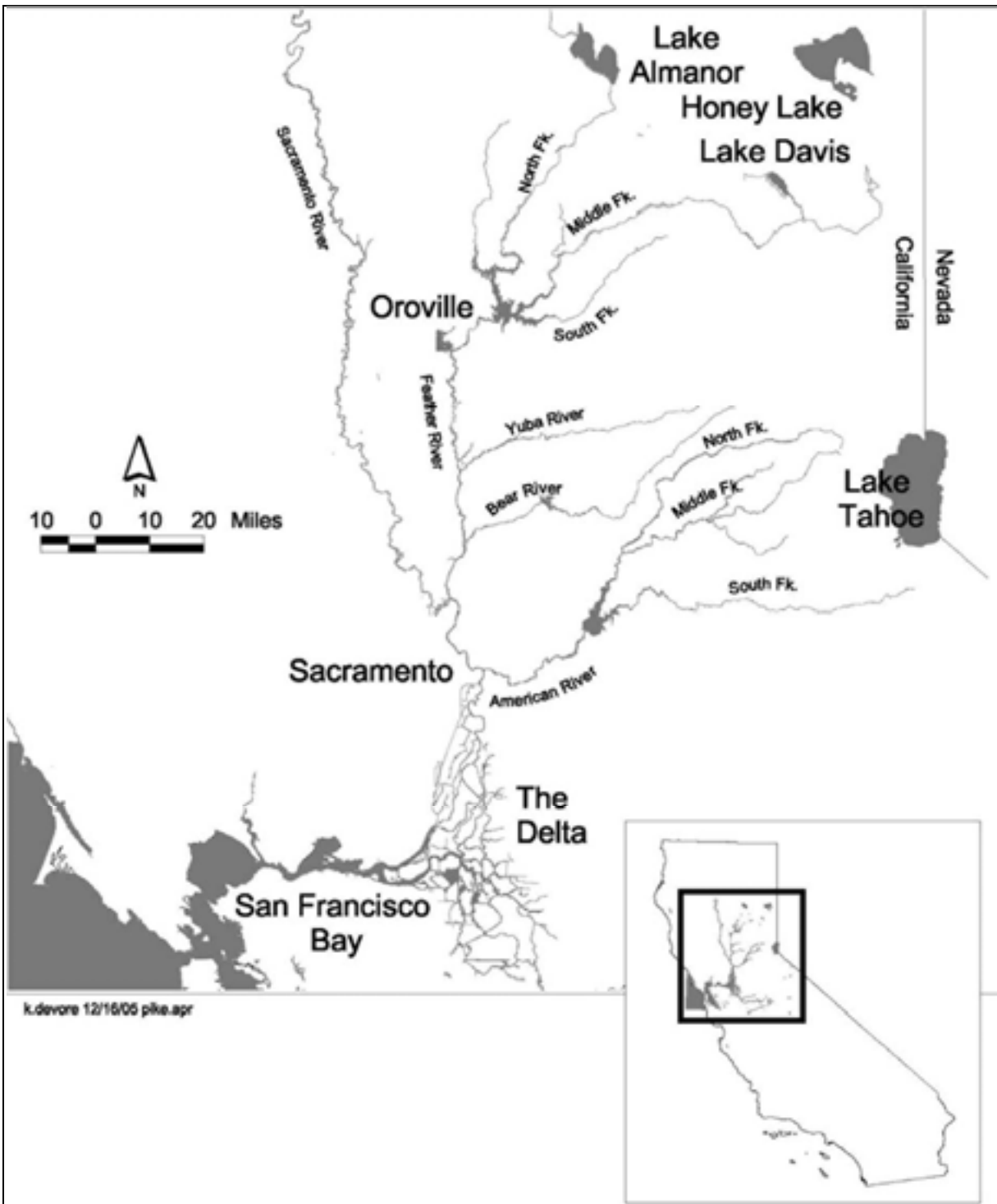
## **Project Responsibilities**


DFG and USFS will jointly undertake and oversee the environmental review process. DFG will determine whether or not to approve a project to eliminate pike from Lake Davis and its tributaries. USFS will determine whether or not to issue a special use permit to DFG and issue forest closure orders. The Center for Collaborative Policy (CCP), a program of California State University (CSU) Sacramento, has been contracted by DFG to provide strategic support for neutral, third-party planning, public participation, and facilitation/mediation assistance with the environmental compliance process. ENTRIX, Inc., an environmental consulting firm, has been contracted by DFG to provide the technical consultant support needed to prepare the EIR/EIS.





	<p><b>LAKE DAVIS and GRIZZLY CREEK WATERSHED</b></p>	<p><b>Figure 1</b></p>
	<p>Proposed Lake Davis Pike Eradication Project</p>	



	<b>LAKE DAVIS WATERSHED</b>	<b>Figure 2</b>
	Proposed Lake Davis Pike Eradication Project	

# PUBLIC SCOPING MEETINGS

Four public scoping meetings were held to solicit comments on the proposed Lake Davis Pike Eradication Project. The meetings were held:

- September 26, 2005 at the Education Center, Eastern Plumas Health Care in Portola, California. Two meetings were held: the first began at 1 p.m.; the second began at 6:30 p.m.
- September 28, 2005 at the Radisson Hotel in Sacramento, California. Two meetings were held: the first began at 1 p.m.; the second began at 6:30 p.m.

## Public Outreach

A press release was prepared regarding the meetings and was sent to various radio, television, and print media (Appendix F). In addition, a direct mailing (Appendix G) was prepared and sent to all residents of Eastern Plumas County using a blanket mailing to appropriate zip codes as follows:

Zip Code	Destination	Quantity
96122	Portola P.O. Boxes	1,160
96122	Portola RR1	512
96122	Portola RR2	612
96129	Beckwourth	100
96103	Blairsden P.O. Boxes	1,020
96103	Blairsden RR	235
96105	Chilcoot	283
96135	Vinton	100
	Total	4,022

The same meeting notice was sent to another approximately 1,000 potentially interested parties, compiled from mailing lists provided by DFG. These mailing lists included residents of the GLRID, property owners in the Lake Davis area, residents enrolled in the Plumas County drinking water well testing program, State, Federal and local agencies, tribes, and existing DFG and USFS contacts.

## Meeting Structure

At each meeting, the facilitator from DFG, Mr. James Nelson, welcomed and thanked the public for attending. After introducing DFG, USFS, and DWR agency staff, Mr. Nelson presented a brief summary of the history leading up to the scoping meeting. He then presented an overview

of the scoping process and the role that attendees could play in the process. Mr. Nelson emphasized that the DFG was there to listen to public and cooperating agency comments. He explained that a report summarizing the issues raised during the meetings, as well as the issues identified in all written comments received during the public comment period, would be published. He further explained that this report, when completed, would be publicly available and meeting attendees would be notified of its availability. Appendix H presents the standardized meeting agenda used for each meeting.

Ms. Julie Cunningham of DFG's Portola office presented a PowerPoint presentation on the pike problem. The presentation included a brief history of invasive species in California (with particular interest on aquatic species) and the pike; a description of pike physiology, biology, and habitat preferences; and DFG lessons learned from the previous eradication effort in 1997. The presentation also included a general overview of the proposed project, and preliminary issues being considered by DFG and USFS (Appendix I). Reference was made to maps illustrating four possible alternatives to the proposed project (Appendix J). Large maps illustrating these possible alternatives were posted in two locations at each meeting for easy access and review by meeting attendees.

Ms. Cunningham described the general goals of the proposed project as being:

- Eliminate pike,
- Restore and maintain a healthy trout fishery in Lake Davis,
- Maintain and support a healthy economy in the Lake Davis region; and
- Maintain clean water for human and ecological uses.

Ms. Angie Dillingham, USFS, explained the USFS's role in the proposed project. Since Lake Davis lies wholly within the Plumas National Forest, the USFS would be responsible for issuance of a special use permit to DFG in the event a treatment project is approved. Additionally, the USFS would anticipate forest closures to protect public safety during a treatment, and cultural resources that could be exposed if the lake is drawn down.

Ms. Cunningham discussed preliminary issues that DFG has identified relative to the proposed project. They include:

- Time needed to draw down and refill the reservoir
- What chemicals are in the rotenone formulations?
- Will the proposed project effectively eradicate pike?
- Economic effects
- Safety of drinking water
- Public health
- Downstream water quality
- Effects on wildlife and invertebrates
- Recreation

- Transportation
- Air quality

A facilitated comment period followed the formal presentation. Individuals wishing to comment were invited to speak from the podium using a microphone so all participants could clearly hear the remarks. Public comments were recorded by a DFG staff member using a laptop computer, typing the comments as a Microsoft Word document, and projecting the document onto a screen visible to all attendees during each meeting (Appendix K). Additionally, notes were concurrently recorded on flip charts and illustrative wall posters by a CCP staff person (Appendix L). All public speakers were asked to review their recorded remarks to ensure their comments were accurately captured. Revisions were made to the satisfaction of the commenter. This provided a written record of comments received at the meetings.

Interested parties were also encouraged to provide comments in writing either on the blank comment cards that were distributed at the meetings (Appendix M), by U.S. mail after the meetings, by e-mail to [northernpike@dfg.ca.gov](mailto:northernpike@dfg.ca.gov), by fax to (530) 832-9706, or by using the on-line comment form at the project website: [www.dfg.ca.gov/northernpike](http://www.dfg.ca.gov/northernpike) (Appendix N).



Photo 1: Scoping meeting in Portola

Photo Credit: Don Strickland

In addition to the previously described meeting materials provided to attendees, the following materials were also made available to all meeting participants:

- An Initial Study prepared by DFG (Appendix D),
- The Project Description prepared by DFG (Appendix D),
- A meeting evaluation form (Appendix O),
- Assorted informational / educational materials about the pike invasion of Lake Davis (Appendix P).

## Participating Staff

The following representatives from the sponsoring CEQA and NEPA agencies and supporting consultants participated in one or more of the scoping meetings:

### Department of Fish and Game

Ed Pert	Paul Stein
Frank Wernette	Stephanie Tom Coupe
Julie Cunningham	Ivan Paulsen
Jim Nelson	Nick Villa
Randy Kelly	Steve Martarano
Sandra Morey	Mike Harris
Sherry Howell	Bob Orange
Lori Powers	Suzanne DeLeon
Jennifer Navicky	Stephanie Buss
Stacey Wick	Alexia Retallack
Troy Swauger	Pat Foy
Steve Ulrich	Steve Kreth
Lilla Thomason	
Lisa Stone	

### U. S. Forest Service

Angie Dillingham	Lee Anne Schramel-Taylor
Jim Peña	Cherie Roher
Rob MacWhorter	

### Center for Collaborative Policy

Dave Ceppos	Jodie Monaghan
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## Meeting Attendance

Approximately 44 individuals attended the September 26, 2005 afternoon (1 p.m.) meeting; approximately 58 individuals attended the evening meeting (6:30 p.m.). Approximately 20 individuals were present at the September 28, 2005 afternoon (1 p.m.) meeting; approximately 19 people attended the evening (6:30 p.m.) meeting. Attendees were encouraged to leave their names on sign-in sheets at the meetings. A list of those attending is provided in Appendix Q. Copies of the actual sign-in sheets are available for inspection at DFG's Portola office: 209 Commercial Street, Portola, CA 96122. Interested parties should contact Ms. Julie Cunningham. Meeting attendees who left contact information have been added to the mailing list for all project-related information.

# PUBLIC COMMENTS

All verbal comments received at the scoping meetings, and all written comments received in response to the NOP/NOI, will be considered during preparation of the draft EIR/EIS. Collectively, 39 verbal comments were made during the four public meetings and 122 comments were received via US mail, email, hand delivery, comment forms on the project website, overnight mail, and fax.

To ensure that a neutral, transparent analysis of all public comments was conducted, DFG and USFS asked CCP to assist in the review, categorization, and memorialization of all comments. The following section presents a summary of the collective review of comments by CCP, which was reviewed by DFG and USFS staff. For public review, all the comments received during the scoping period are available as appendices online at <http://www.dfg.ca.gov/northernpike>. Comments recorded at the scoping meetings are presented in Appendix K. Copies of all written correspondence received during the comment period are presented in Appendix R.

The following sections present summaries of comments received from the public. The first section defines the categories and subcategories used to organize the comments. The second section presents a summary of all verbal comments made during the four public scoping meetings. The third section presents a summary of all written comments provided during the public scoping period.

## Public Comment Categories

Through the process of analyzing all the comments, several themes emerged that have been organized into specific categories and sub-categories. These categories reflect the unique characteristics, differences, and similarities of the specific comments received. The following lists each category and sub-category. Descriptions of the criteria used to determine if a comment applied to a specific category are presented further in this section.

### General Sentiments about the Proposed Project

- Oppose pike eradication - *A statement specifically opposing pike eradication*
- Oppose pike eradication and the proposed project – *A statement specifically opposing pike eradication and the use of chemical treatment in Lake Davis to eradicate pike.*
- Support pike eradication - *A statement specifically supporting pike eradication*
- Support pike eradication and the proposed project - *A statement specifically supporting pike eradication and the use of chemical treatment in Lake Davis to eradicate pike.*

*Note: The above categories differentiated between support or opposition of pike eradication, and support or opposition of the specific proposed project. In other cases, commenters simply did not address the proposed project. Therefore, the reviewers have created the above subcategories to ensure that comments against or for eradication are not inadvertently assumed to be in support or opposition of the proposed project as well.*

## Project Issues

- Ecological Health Impacts
- Human Health Impacts
- General Monitoring
- Chemical Formulations
- Chemical Treatment Methods
- Alternative Eradication/Control Methods
- Water Quality
  - Drinking Water/Human Health
  - Monitoring
- Air Quality
  - Health Exposure
  - Odors
  - Dust
- Resource Management
  - Biological Conditions
  - Environmental Restoration
  - Surface Water/Groundwater Conditions
  - Land Planning
- Pike Reintroduction
- Water Supply and Management.
- Waste Management
- Cultural Resource Management
- Species Surveys
- Economic Impacts
- Public Outreach and Education
- Agency and Regulatory Responsibilities
- CEQA/NEPA Alternatives Development and Impact Analysis
- CEQA/NEPA Project Description, Project Purpose, and Funding *t*
- Project History
- Miscellaneous

As reflected in Appendices K and R, almost all commenters addressed multiple issues in their comments. For example, one speaker may have made three separate comments all related to economic impacts. Rarely did a commenter make a single comment about a single issue. For the purpose of this analysis, the reviewers treated each comment about each category as a stand alone item to ensure that comments were not inadvertently aggregated. Therefore, it is important to note that while the following sections describe the total number of people that made verbal and written comments, the number of total comments exceeds the number of people commenting. It is also important to reiterate that all comments are considered equivalent and no preferential consideration will be made by DFG or USFS based on the total number of similar comments received.



## Summary of Scoping Meeting Verbal Comments

There were 39 total speakers from the four scoping meetings. Of those 39 speakers:

- 3 specifically oppose chemical treatment of Lake Davis
- 6 specifically support the eradication of pike in Lake Davis including 4 persons specifically in support of the proposed chemical treatment

Ecological Health Impacts - *All comments and questions about health impacts to species other than humans as a result of proposed chemical treatments*

- Ecological impact issues were raised 11 times

Regarding ecological impacts, most comments reflect an interest for the project proponents to have a more comprehensive understanding about the effects of proposed chemical treatments (e.g. rotenone) on species ranging from invertebrates to birds and land-based animals. Similarly, several comments addressed the potential for bio accumulation of toxics and the likelihood of animals being at risk by eating dead fish and other organisms killed by a chemical treatment.

Human Health Impacts - *All comments and questions about health impacts to humans as a result of proposed chemical treatments*

- Human Health impact issues were raised 4 times

Regarding human health impacts, two comments were about general health impacts potentially associated with a chemical treatment. One comment suggested a linkage between rotenone exposure and central nervous system diseases. One comment questioned whether chemicals thought to pose no threat today might be identified in the future as posing health risks.

General Monitoring - *All comments and questions about the need to conduct monitoring in and near Lake Davis after a chemical treatment (not including water quality monitoring which is addressed separately under the Water Quality issue)*

- General monitoring issues were raised 3 times

Two comments addressed the monitoring of physical conditions in and near the lake after a treatment. One comment focused on the need for independent monitoring of any mitigation measures to ensure adequate compliance.

Chemical Formulations - *All comments and questions about the makeup, registration, history, and testing of all chemicals that could potentially be used in a proposed treatment*

- Chemical formulation issues were raised 8 times

Several comments on this issue were related to ecological and human health inquiries but specifically addressed the structure and makeup of potential treatment formulations. Several

comments also focused on ensuring the public availability of information regarding potential treatment formulations or an objection that such information has not previously been available.

Chemical Treatment Methods - *All comments and questions about the currently proposed chemical treatment methods or some alternative chemical treatment methods*

- Chemical treatment method issues were raised 7 times

Almost all comments about the proposed treatment methods are about the geographic extent and frequency of the treatment. More specifically, several comments provide suggestions or questions about the treatment of the lake's tributaries. Another group of questions and suggestions regards the frequency of treatments and the duration of time between treatments. Most of these comments recommend at least two treatments with differing opinions about how frequent the treatments should occur.

Alternative Eradication / Control Methods - *All comments and questions about methods to eradicate and/or control northern pike other than chemical treatment*

- Alternative method issues were raised 9 times

This category provided a wide range of perspectives from speakers. Three speakers recommended total dewatering of the lake rather than the use of chemical treatments. Two speakers proposed making the lake a pike fishery and/or using fishing tournaments as a method to eradicate or control the pike. Three speakers proposed unique treatments such as focused electroshocking of fish, the distribution of fish poison through small capsules attached to pike prey, and the introduction of modified pike. The remaining comments addressed general questions such as the need for chemical treatments versus other options.

Water Quality - *All general comments and questions about water quality*

- Drinking Water/Human Health – *All comments and questions about water quality as it specifically pertains to drinking water and human health impacts*
- Monitoring - *All comments and questions about water quality and the specific need to conduct water quality monitoring*
- General water quality issues were raised 5 times
- Drinking water and human health issues were raised 2 times
- Water quality monitoring issues were raised 3 times

Several speakers raised general concerns about threats to water quality and past damages to water quality that are believed to remain unresolved. Drinking water comments were focused on perceived threats to nearby wells. Comments about monitoring were primarily focused on the need to continue and/or extend monitoring programs that were started after the last treatment effort.

Resource Management - *All resource management categories are described below. There is no general description for this category*

- Biological Conditions – *All comments and questions about the management and restoration of affected species after a proposed treatment*
- Environmental Restoration – *All comments and questions about the restoration of the lake and surrounding environments/habitats after a proposed treatment*
- Surface Water/Groundwater Conditions – *All comments and questions about the management and restoration of surface water and groundwater conditions after a proposed treatment (including lake refill options and time, impacts to springs, and similar topics)*
- Biological resource issues were raised 4 times
- Environmental restoration issues were raised 4 times
- Surface water and groundwater resource issues were raised 3 times

Discussion of biological resources provided a range of themes including concern about pike infestation of the Delta, the health of the entire ecosystem, and questions about the genetic lineage and geographic source of trout that originally were used to stock the lake.

Comments and questions about environmental restoration all focused on the need of project proponents to understand and/or ensure that full restoration of Lake Davis aquatic and terrestrial systems should take place after any treatment method.

Comments and questions about surface water focused on the duration to drain and fill the lake and associated impacts.

Pike Reintroduction - *All comments and questions about the potential reintroduction of pike into Lake Davis after a proposed treatment*

- Pike reintroduction issues were raised 3 times

Comments and questions about pike introduction all reflect a deep concern that pike have historically been introduced to the lake through human-induced or natural (avian deposition) means and that any treatment method either has to prohibit, or will be incapable of prohibiting reintroduction.

Water Supply and Management - *All comments and questions about water supply that do not specifically address water quality*

- Water supply and management issues were raised 8 times

All comments reflect the concerns of local and regional citizens that Portola and environs have been impacted by water supply deficiencies caused by the last treatment. Further statements directly address the need for the lead agencies to support the completion of a water treatment facility.

Waste Management - *All comments and questions about waste management associated with a proposed treatment including the removal of dead animals, trash, equipment, and other materials*

- Waste management issues were raised 2 times

Comments reflect a concern about the management and disposition of dead animals, and litter / waste related to a chemical treatment.

Cultural Resources Management - *All comments and questions about the management and protection of historic and prehistoric artifacts that might be impacted from a proposed treatment including the discovery of resources currently submerged and in the surrounding terrestrial environment*

- Cultural resource issues were raised 1 time

A question was asked about the possibility that the lake might not be refilled if an artifact of major cultural significance is found.

Species Surveys - *All comments and questions about the specific need to conduct species surveys before and/or after a proposed treatment*

- Species surveys issues were raised 2 times

Questions and comments were raised about the need to have a comprehensive understanding of species populations and distributions in and near the lake prior to any treatment so that the project proponents will be able to ensure that adequate post-treatment restoration takes place.

Economic Impacts - *All comments and questions about economic impacts to the state, surrounding communities and region including recreation, businesses, real estate values, and community services. Also includes all comments and questions about the proposed regional / local economic study and the relationship of that study to CEQA and NEPA economic impact analysis*

- Economic impact issues were raised 6 times

Comments and questions were diverse but all reflect local and regional concerns about economic impacts. Specific concerns include the impact to home values and opportunities for resale to capitalize on investments, the negative perception of Portola and environs resulting from the past and potential future treatment, and the general need of project proponents to have a comprehensive understanding of the impacts associated with another treatment.

Public Outreach and Education - *All comments and questions about the need for public outreach and education related to a proposed treatment including human health issues, ecological issues, treatment options, and similar topics*

- Public outreach and education issues were raised 2 times

One comment reflected the sentiments of a specific member of the public that believes they were appointed to provide oversight of DFG activities but not included in any further project communications. The other comment focused on the general need for public information about chemicals and treatments.

Agency and Regulatory Responsibilities - *All comments and questions about the need for and/or roles of local, State, and Federal agencies related to a proposed treatment*

- Agency responsibility issues were raised 4 times

This category also had a diverse range of comments. Some participants addressed a general lack of trust for DFG and the entire process. Another speaker made a more specific comment about needing to ensure that the EIR/EIS is truly available to the public. The other speakers had questions about the decision-making process for a preferred alternative.

CEQA/NEPA Alternatives Development and Impact Analysis - *All comments and questions about the specific process of developing and analyzing CEQA/NEPA alternatives*

- Alternatives development issues were raised 6 times

Several of the comments and questions about this issue focused on the speakers' desire to see the lead agencies take a broader perspective on the range of alternatives to be considered, including careful consideration of the no-action alternative. A few questions and concerns were raised about the scientific adequacy of alternatives impact analysis.

CEQA/NEPA Project Description, Project Purpose, and Funding - *All comments and questions specifically about the rationale for the proposed project, the basis for the current suite of alternatives, and confirmation of available funding to conduct a proposed project*

- Project description, purpose and funding issues were raised 3 times

Two questions were asked about the adequacy of funding to complete a comprehensive treatment project. One comment was made questioning the premise of the project based on a potential threat of pike invasion to the Delta.

Project History - *All comments and questions about the history of Lake Davis including the last treatment effort and topics prior to the discovery of pike*

- Project history issues were raised 4 times

Most of the comments and questions about this issue focused on theories about pike introduction to the lake and subsequent management of the pike prior to the 1997 treatment. One general comment was made that the previous treatment was not done properly.

## Summary of Scoping Period Written Comments

DFG and USFS received a combined total of 122 written comments. Of those comments:

- 27 specifically oppose chemical treatment of Lake Davis
- 30 specifically support the eradication of pike in Lake Davis including 8 persons specifically in support of the proposed chemical treatment

Similar to the previous section, the following section presents a summary of the issues regarding the project that were provided by the members of the public as written comments. It also includes formal written comments provided by State and local agencies. Due to the larger number of written comments, several of the following summaries are less specific than the previous descriptions of verbal comments.

*Note: Except where otherwise provided, italicized category descriptions are not restated in this section. Categories not germane to the previous section are described below.*

### Ecological Impacts

- Ecological impact issues were raised 14 times

Similar to the verbal comments, almost all the written comments reflect an interest by stakeholders for the project proponents to have a more comprehensive understanding about the effects of proposed chemical treatments on a wide range of species. Also similarly, many comments addressed the potential for indirect impacts and bio accumulation of toxics and the likelihood of animals being at risk by eating dead fish and other organisms killed by a chemical treatment. A few comments also addressed the need to more comprehensively assess the present and future ecological impact of pike in other California river and lake systems. Several of these comments reject the premise that the pike need to be eradicated to protect the Delta and other ecosystems. A small number of comments request comprehensive studies and presentation of all available previous assessments regarding impacts of chemical treatments to primary species targets and secondary impacts to non-target species.

### Human Health Impacts

- Human Health impact issues were raised 5 times

Regarding human health impacts, a few comments were about general health impacts potentially associated with a chemical treatments and the progression of these chemicals through the food web. In particular, two comments specifically addressed human consumption of contaminated fish tissue. A few other comments raised concerns about a potential linkage between rotenone exposure (and other general chemicals) and central nervous system diseases. A few other comments raised questions about the lead agencies' intentions to develop a comprehensive monitoring program of human health conditions in the region. One specific comment also stated that the CA Department of Pesticide Regulation was not qualified to do such a program.

### General Monitoring

- General monitoring issues were raised 2 times

The two comments suggested the need for monitoring physical conditions in and near the lake after a treatment.

### Chemical Formulations

- Chemical formulation issues were raised 8 times

Similar to the verbal comments, most comments on this issue were related to ecological and human health inquiries but specifically addressed the ingredients and structure of potential treatment formulations. Most comments also focused on ensuring the public availability of information regarding potential treatment formulations or an objection that such information has not previously been available. A few comments were information from other coordinating State agencies providing background information about the current registration, and formulations of rotenone-based treatment products.

### Chemical Treatment Methods

- Chemical treatment method issues were raised 16 times

Almost all comments and questions about the proposed treatment methods were about the geographical extent and frequency of the treatment. Specific related comments focused on the level of treatment in tributaries, and the proximity of treatment and indirect risks to nearby facilities such as schools and medical centers. A few comments also requested information and analysis about the persistence of treatment chemicals after the treatment occurs and what the likely retention time is for these chemicals to remain in sediments and the water. A few comments propose preferences of the use of powdered rotenone over liquid formulations to minimize the use of dispersing chemicals. One comment also proposed options for rotenone neutralization that would minimize exposure times to humans and the ecosystem.

### Alternative Eradication/Control Methods

- Alternative method issues were raised 28 times

Aside from comments in favor of the project, this category received the single largest set of comments. Twenty one comments proposed public fishing and the lifting of existing prohibitions as a method to eradicate or control the pike. Of those 21 comments, 10 favor fishing tournaments or some similar event as a method to eradicate or control the pike. Five of the 21 comments also propose the use of a bounty for each fish. Seven comments proposed unique treatments including: the introduction of a larger predator, the distribution of fish poison through small capsules attached to pike prey, the use of sonar to kill the pike (similar to current

challenges faced by the US Navy regarding impacts to whales), screening of the dam outlets, drawing down and heating the lake water to a terminal temperature for pike survival, and destratification of the water column by pumping oxygen or pure nitrogen into the lake from the lake bottom .

### Water Quality

- A general water quality issue was raised 1 time
- Drinking water and human health issues were raised 9 times
- Water quality monitoring issues were raised 6 times

As with the verbal comments, several written comments raised general concerns about threats to water quality and past damages to water quality that are believed to remain unresolved. Drinking water comments were focused on perceived threats to nearby wells. Comments about monitoring were primarily focused on the need to continue and/or extend monitoring programs that were started after the last treatment effort. A few comments also addressed the need for full disclosure of and compliance with all permitting requirements associated with chemical treatments.

### Air Quality - *All general comments and questions about air quality*

- Health Exposure – *All comments and questions about air quality as it specifically pertains to human health impacts*
- Odors – *All comments and questions about air quality as it specifically pertains to related odors*
- Dust – *All comments and questions about air quality as it specifically pertains to dust associated with the drying out of the exposed lake bottom as result of dewatering the lake*
- A general air quality comment was raised 1 time
- Health exposure issues were raised 5 times
- Odor issues were raised 1 time
- Dust issues were raised 2 times

A number of human health related questions and comments were raised regarding exposure of at-risk individuals such as those that have chemical sensitivities, neurological or immune disorders, respiratory ailments, and generally high-risk citizens like children and the elderly. Similar comments were made about inhalation of hydrocarbon materials. One comment was raised about the risk of odors from chemical treatments and decaying animal tissue. Dust from the exposed and dried lake bed was also raised as a potential concern.

### Resource Management

- Biological resource issues were raised 2 times
- Surface water and groundwater resource issues were raised 9 times
- Land planning issues were raised 4 times



- Land Planning – *All comments and questions about the management of land resources and associated infrastructure near Lake Davis during and after a proposed treatment*

Discussion of biological resources focused on the general health and management of the entire ecosystem.

Surface water comments and questions covered a range of topics including the duration to drain and fill the lake and associated impacts, potential streambank and adjacent soils erosion associated with lowering the elevation of the tributaries and lake, impacts to downstream diverters by minimized lake discharges, and potential flood flow management. Groundwater comments focused on the potential impacts to the adjacent aquifer from chemical treatments and impacts to future aquifer recharge from a lengthy draw down of the lake.

Comments on land planning issues focused primarily on impacts to USFS terrestrial recreation resources such as roads and trails, and impacts to key vegetation management areas such as aspen groves, meadows, and other open spaces. Other land planning and management questions focused on the potential for, and duration of area closures from public use,

#### Pike Reintroduction

- Pike reintroduction issues were raised 3 times

Similar to the verbal comments, written comments and questions about pike introduction all reflect a deep concern that pike have historically been introduced to the lake through human-induced or natural means and that any treatment method either has to prohibit, or will be incapable of prohibiting reintroduction.

#### Water Supply and Management

- Water supply and management issues were raised 9 times

Several comments reflected the concerns of local and regional citizens that Portola and environs have been impacted by water supply deficiencies caused by the 1997 treatment. Other comments expressed opinions that the lead agencies need to support the completion of a water treatment facility. Several comments by local agencies stressed the need for adequate and long term monitoring associated with water supply and delivery.

#### Waste Management

- A waste management issue was raised 1 time

The comments reflected concern about the management and disposition of dead animals, and other solid waste related to a chemical treatment.

### Cultural Resources Management

- A cultural resource issue was raised 1 time

The California State American Heritage Commission provided a list of tribal contacts that might have an interest in the proposed Lake Davis project.

### Species Surveys

- Species surveys issues were raised 6 times

As with the verbal comments, questions and comments were raised about the need to have a comprehensive understanding of species populations and distributions in and near the lake prior to any treatment so that the project proponents will be able to ensure that adequate post-treatment restoration takes place.

### Economic Impacts

- Economic impact issues were raised 13 times

Comments and questions were diverse but all reflected local and regional concerns about economic impacts. Particular focus came from several local agencies on the extent of economic impacts beyond recreational interests, specifically about the negative perception that chemical treatments have on the region and the associated affect that has on other business. Related to that concern is the risk that impacts to the local economy affect tax revenues which in turn support social services in Portola and Plumas County. Other concerns raised by local agencies and citizens included the impact to home and property values and opportunities for resale to capitalize on investments. Lastly, a few comments addressed a need for the lead agencies to establish a trust fund or similar compensation mechanism to help local citizens weather economic hardship associated with a future treatment.

### Public Outreach and Education

- Public outreach and education issues were raised 6 times

Most comments focused on the general need for public information about chemicals and treatments, and opportunities for enhanced local education through civic events and school programs. Additionally, several comments were also made stressing the need to improve public notification of events and meetings related to the project planning, and potential project implementation.

### Agency and Regulatory Responsibilities

- Agency responsibility issues were raised 11 times

This category had a diverse range of comments. Some comments addressed the need for explicit delineation and public education about project roles and responsibilities. Other comments focused on the need for local politicians and leaders to act in the best interest of local citizens. Other comments focused on the range of and need for additional, related environmental compliance activities such as Federal Endangered Species Act, and Clean Water Act compliance and similar State regulations related to roadway, water, ecological health, and chemical management impacts.

#### CEQA/NEPA Alternatives Development and Impact Analysis

- Alternatives development issues were raised 7 times

Similar to the verbal comments, many written comments and questions about this issue focused on the commenters' desire to see the lead agencies take a broader perspective on the range of alternatives to be considered, including careful consideration of the no-action alternative. Also similar to the verbal comments, a few questions and concerns were raised about the scientific adequacy of alternatives impact analysis.

#### CEQA/NEPA Project Description, Project Purpose, and Funding

- Project description, purpose and funding issues were raised 2 times

Questions were asked about the premise of the project based on a potential threat of pike invasion to the Delta.

#### Project History

- Project history issues were raised 3 times

The comments and questions about this issue focused on the general history of the lake, pike introduction, and the previous treatment and associated problems.

#### Miscellaneous - *All other comments and questions not covered under the previous bullets*

- There were 9 miscellaneous comments

Miscellaneous comments covered a range of topics. Some are general, non-substantive correspondence between lead agency staff and staff from other agencies. One comment stated an intent to fish for pike in Lake Davis. A few were general observations about conditions in and near the lake but not expressing a concern, issue, or question.

# CONCLUSION

Results from the public scoping process reflect a diverse, challenging range of issues for DFG and USFS to address regarding the proposed project. These results reflect a strong public concern for, and commitment to Lake Davis by people and organizations that care about this unique natural resource. DFG and USFS remain committed to supporting public outreach and involvement activities throughout the CEQA/NEPA process.

Announcements and updates regarding the proposed Pike Eradication Project will be made available online at: <http://www.dfg.ca.gov/northernpike>, including notices for further public involvement.

Additional copies of this report are available online at: <http://www.dfg.ca.gov/northernpike>, or may be requested from:

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